CHAPTER 2

STANDARDIZATION IN THE ACQUISITION PROCESS

A. GENERAL

Standardization is an important consideration throughout the acquisition process. DoD Directive 5000.1, DoD Instruction 5000.2, the FAR, and the DFARS (references (b) through (e)) all require that standardization considerations be a part of the acquisition process. Table 2-1, below, identifies major sections from these acquisition regulation documents that involve standardization or standardization-related requirements. As with all requirements, users must properly apply and tailor them requirements to achieve maximum benefits.

Standardization-Related Requirement	Applicable Acquisition Regulation Sections
General Standardization-Related Policies	Part 6, Section R of reference (c)
Standardization Consideration in Acquisition Plan	Part 7 of reference (d) Part 207 of reference (e) Part 234 of reference (e)
Parts Control Program	Part 6, Section R of reference (c) Part 207 of reference (e)
Standardization as Justification for Other Than Full and Open Competition	Part 6 of reference (d) Part 206 of reference (e)

Table 2-1. Requirements for Standardization in Acquisition Regulations

Standardization-Related Requirement	Applicable Acquisition Regulation Sections
Development, Selection, and Use of Standardization Documents	FAR, Part 7 (reference (d)) Part 10 of reference (d) DFARS, Part 210 (reference (e)) DoD Instruction 5000.2, Part 6, Section L (reference (c)) Part 6, Section Q of reference (c) Part 10, Section C of reference (c)
Nondevelopmental Item (NDI) and Commercial Acquisition	DoD Directive 5000.1 (reference (b)) Part 6, Section L of reference (c) Part 7 of reference (d) Part 11 of reference (d) Part 211 of reference (e)
Qualif icat ion	Part 9 of reference (d) Part 209 of reference (e)

Table 2-1. Requirements for Standardization in Acquisition Regulations, continued

Standardization-Related Requirement	Applicable Acquisition Regulation Sections
Metrication	DoD Instruction 5000.2, Part 6, Section M (reference (c)) FAR, Part 10 (reference (d))

Table 2-1. Requirements for Standardization in Acquisition Regulations, continued

B. ACQUISITION PLANNING

Acquisition plans must consider standardization. In the Department of Defense, the acquisition process is structured into five phases that cover the total acquisition life cycle. Standardization plays an important role in each of these phases. Not every acquisition requires all of these phases, and the procuring activity must tailor the phases to suit the acquisition strategy. One of the important benefits of proper standardization planning and application is that it may eliminate or shorten certain acquisition phases. Figure 2-1, below, illustrates the acquisition life-cycle and standardization related decisions that must be considered during the appropriate acquisition phase. For consideration of standardization requirements, the procuring activity may require a standardization plan in accordance with MIL-STD-680 (reference (f)). Since standardization objectives will vary from program to program, the procuring activity must tailor the requirements of MIL-STD-680. Subsections B.1. through B.S., below, provide information on when various standardization-related decisions or requirements should or must be applied during the acquisition phases. These procedures primarily apply to system or subsystem acquisition planning, but may also apply to the acquisition of equipments, components, parts, and materials.

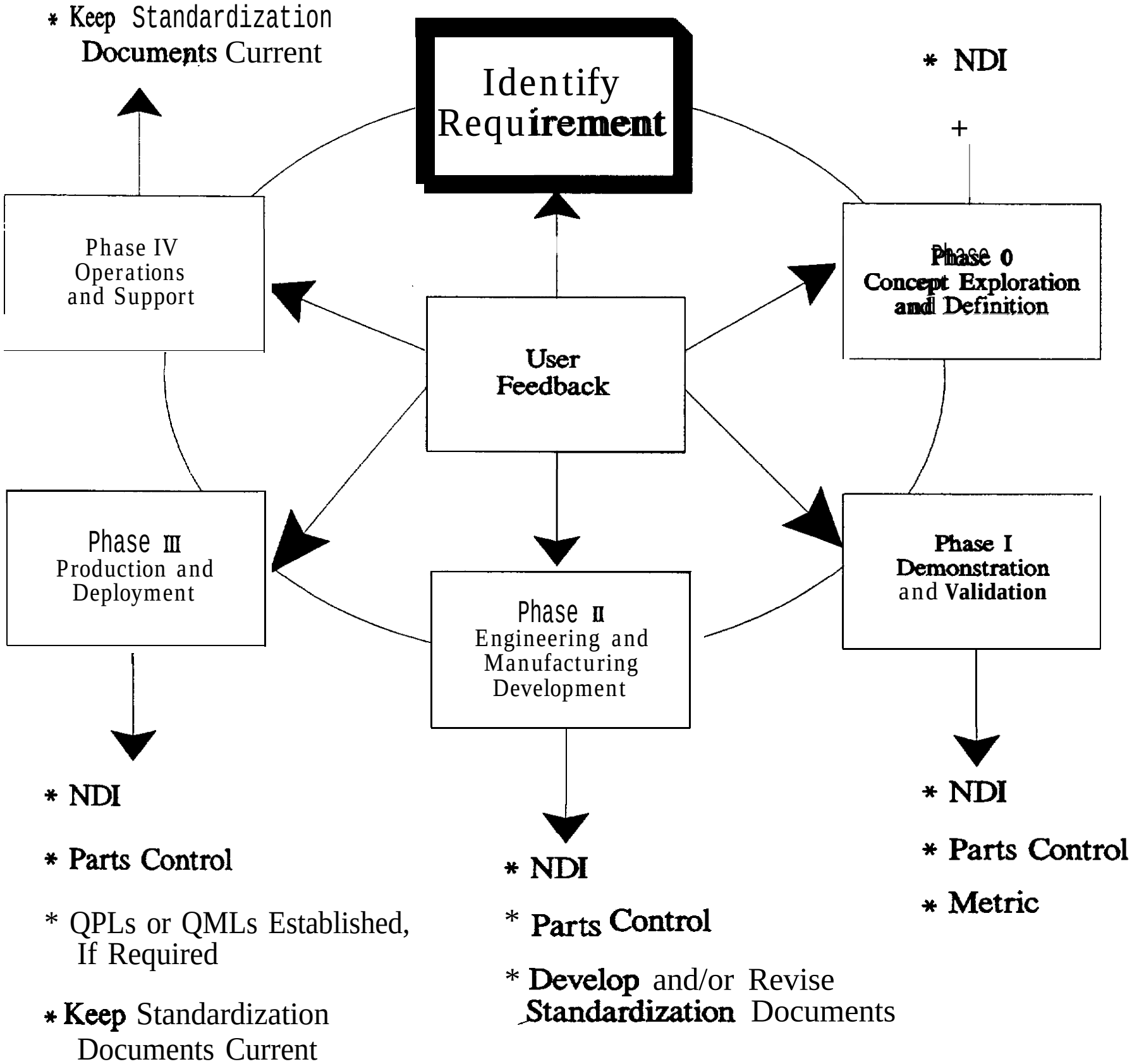

Figure 2-1. Standardization Considerations in the Acquisition Life Cycle

1. NDI. Using a NDI approach to acquisition reduces acquisition lead time and costs; allows the Department of Defense to take advantage of proven, current technology; reduces risks associated with development; and supports our industrial base. The SD-2 (reference (9)) gives detailed guidance on the use of NDI in the acquisition process. Consider NDI throughout all of the acquisition phases using the following criteria:

a. Phase 0 - Concept Exploration and Definition. Explore NDI solutions and give them major consideration, including tradeoffs of performance requirements against NDI advantages in schedule, cost, risk, and quality.

b. Phase I - Demonstration and Validation. If a NDI solution emerges from Phase 0 as the most promising concept, demonstrate that the NDI will meet the mission need or user's requirement. A NDI approach can reduce the time needed to accomplish this phase. Identify technical problems with NDIs during this phase.

c. Phase II - Engineering and Manufacturing Development. If a NDI solution meets the mission need or users requirements, it may be possible to skip this phase. A modified NDI will require some minor engineering and manufacturing development, but use of an NDI can reduce the time and expense associated with Phase II. Trade-off studies should be conducted to determine if the NDI solution is more cost-effective than new development. If the acquisition strategy is to develop a new item, use NDIs for subsystems, equipments, components, parts, and materials to the maximum extent possible. During Phase II, identify the essential standardization requirements documents. For commercial NDIs, the appropriate non-Government standards (NGSS) and commercial item descriptions (CIDs) should be identified, updated if necessary, or developed. For military-unique NDIs or commercial NDIs that have been modified to include some military-unique features, the appropriate military and Federal specifications and standards should be identified, updated if necessary, or developed.

d. Phase III - Production and Deployment. It may be necessary to amend or revise the associated standardization documents to address technical problems. It may also be necessary to update the configuration baseline to incorporate any new or improved NDI innovations.

e. Phase IV - Operations and Support. To ensure that NDIs continue to provide the capabilities needed to support the mission need or user's requirement, it is probable that the supporting standardization documents will have to be updated during the life cycle. Also, the configuration baseline should continue to be updated to allow for insertion of NDIs that may meet the mission need or user's requirement more efficiently or cost effectively.

2. Parts Control. By reducing the proliferation of parts and associated documentation and identifying parts with known performance, quality, and reliability, the DoD Parts Control Program can reduce acquisition costs, time, and risks, while improving quality and supportability. Use the procedures in MIL-STD-965 (reference (h)) to implement parts control, and tailor the requirements for each acquisition. The SD-7 and MIL-HDBK-402 (references (i) and (j)) give guidance on tailoring and application of the DoD Parts Control Program. Consider parts control throughout most of the acquisition phases using the following criteria:

a. Phase O – Concept Exploration and Definition. Do not apply parts control during this phase.

b. Phase I - Demonstration and Validation. Part 6, Section R of DoD Instruction 5000.2 (reference (c)) requires the use of the Parts Control Program during Phase I, if its application is expected to yield significant cost savings.

c. Phase II – Engineering and Manufacturing Development Part 6, Section R of reference (c) requires the use of the Parts Control Program during Phase II for all acquisition programs, except the purchase of commercial equipment, software contracts, and study contracts not involving the selection or recommendation of specific parts are exempt from using MIL-STD-965 (reference (h)). However, the procurement of commercial equipment may benefit from selective application of reference (h) .

d. Phase III - Production and Deployment. Parts control should be applied during Phase III for any new or modified parts that may result from engineering change proposals or baseline design modifications.

e. Phase IV - Operations and Support. Parts control should be continued for any acquisition where the selection and use of parts must be controlled to achieve effective life-cycle benefits and logistic support.

3. Standardization as Justification for Other Than Full and Open Competition. Generally, standardization emphasizes and supports competition through the development and use of performance-oriented standardization documents. However, Section 6.302-l(b) (4) of the FAR (reference (d)) describes circumstances under which standardization may be used as a justification for other than full and open competition. If standardization requirements will necessitate other than

full and open competition, the acquisition plan must provide the necessary justification, as required by Part 7 of the FAR (reference (d)), and include the clause in Subpart 52.215-4 of reference (d) in the initial solicitation.

4. Metrication. DoD Instruction 5000.2 (reference (c)) requires metric measurements in those elements of new defense systems requiring new design, unless the milestone decision authority grants a waiver. To comply with this requirement, the decision to require metric design or seek a waiver must be made during Milestone I. Metric opportunities for individual equipments, components, parts, and materials should be considered throughout Phases II through IV. While metric requirements are not mandated for modifications or upgrades to existing nonmetric designs or for nonmetric commercial items, continue to consider using metric requirements. The SD-10 (reference (k)) gives guidance for metric transition decisions and requirements.

5. Qualification. If the specifications identified during Phase II contain a qualification requirement (see definition 53 for qualification in Appendix A) and limit the sources of supply to those listed on a qualified products list (QPL) or a qualified manufacturers list (QML) , the QPL or the QML must have at least one source for each condition of supply before Phase III. More than one source is desirable. See Appendix B for detailed procedures on qualification criteria and procedures. The SD-6 (reference (1)) gives guidance for qualification decisions and requirements.

C. PRODUCT DESCRIPTIONS

Part 10 of the FAR and Part 210 of the DFARS (references (d) and (e)) stress the importance of developing and using the right type of product description to satisfy the immediate technical and acquisition needs, and to support such broader and long-term acquisition objectives as logistics support, competition, quality, use of NDI, best value, and standardization. While this Manual addresses only the policies and procedures for standardization documents, the following briefly discusses the different types of product descriptions to assist the user in making the correct selection for document development.

1. Standardization Documents. Standardization documents include military specifications and standards developed under the consensus procedures established by this Manual; CIDs and Federal specifications and standards developed under the consensus procedures of the

FPMR 101-29 (reference (m)); and NGSS developed under the consensus procedures of private sector standards organizations. Standardization documents shall be developed and used for products, materials, and processes that have or could have multiple applications; to promote commonality and interoperability between the Military Departments and the Defense Agencies, and between the United States and its allies; and to limit the variety of items in the military supply system. The DoDISS (reference (n)) lists approved military and Federal standardization documents and adopted NGSS.

2. Program-Unique Documents. Program-unique documents are in accordance with MIL-STD-490 (reference (o)) . Program-unique documents apply only to a particular weapon system or program, and little or no potential exists for the application of these documents to other systems or programs. Because of this uniqueness or because a design is still under development and has not stabilized to an extent to warrant standardization, there are no significant advantages to developing a standardization document. Generally, system and development type specifications will be program-unique documents. Program-unique documents may be developed for products, materials, and processes unique to a specific program, or if they are intended to control configuration during the development phases. Once production begins, consider converting any program-unique documents for products, materials, or processes to a standardization document so that it may better support reprocurement, and gain visibility among other potential users by being listed in the DoDISS (reference (n)).

3. Purchase Descriptions. Purchase descriptions may be used when no satisfactory standardization document exists to buy products. Use of purchase descriptions shall be limited to one-time buys, small purchases, or when the development of a standardization document is not considered cost effective. Purchase descriptions are not intended for repetitive procurements. To satisfy an urgent procurement situation, consider using an interim standardization document until a coordinated standardization document can be developed or modified to meet future procurement requirements (see Chapter 5, subsection D.3.) .

D. APPLICATION AND TAILORING OF STANDARDIZATION DOCUMENTS

Standardization documents must be properly applied and tailored during the acquisition process to ensure that every requirement is necessary and contributes to mission performance. The policies governing the application and tailoring of standardization documents come under a larger effort called “acquisition streamlining.” Part

10, Section C of DoD Instruction 5000.2; Parts 7 and 10 of the FAR; and Part 210 of the DFARS (references (c) , (d) , and (e)) address acquisition streamlining policies. MIL-HDBK-248 and MIL-HDBK-800 (references (p) and (q)) provide guidance on applying and tailoring st andardizat ion documents, besides other inf ormat ion on acquis it ion streamlining.

1. Proper Application of Standardization Documents. Properly applied, standardization documents can reduce costs, schedule, and risks, while improving quality. However, if users apply standardization requirements unnecessarily, excessively, or prematurely, costs and schedule will often increase, and quality may suffer because the essential requirements become hidden among many nonvalue added requirements. To avoid the misapplication of requirements, challenge the use of every standardization document to ensure that requirements are unambiguous, understood, pertinent, realistic, and affordable. Where appropriate, standardization documents should include application guidance to assist the document users. Proper timing is also important in the application of standardization documents. Applied too soon, a standardization document can inhibit or prohibit innovative, cost-effective solutions. To avoid premature application, apply standardization documents at the proper acquisition phase, as follows:

a. Phase 0 - Concept Exploration and Definition. Standardization documents shall not be mandatory, but they may be cited in the contract for guidance.

b. Phase I - Demonstration and Validation. Standardization documents shall not be mandatory, but they may be cited in the contract for guidance.

c. Phase II - Engineering and Manufacturing Development. The applicability of standardization documents in Phase II shall be limited to the documents specifically cited in the contract as requirements and to the specified portions of documents referenced in those cited documents (first tier references) . All other documents invoked indirectly through referencing (second tier and below) shall be for guidance only.

d. Phase III – Production and Deployment. Contractually mandatory standardization documents shall be limited to those identified in the product baseline.

2. Selection of Standardization Documents. When a standardization document is applied, it must meet DoD essential needs for the application. The selection of standardization documents applied in an acquisition shall comply with Part 10 of the FAR (reference (d)) . MIL-STD-970 '(reference (r)) may be used for guidance or imposed on the contractor after Phase I to provide a selection hierarchy. Generally, this hierarchy supports commercial acquisition and competition. Essentially, requirements documents shall be applied using an order of preference as follows:

a. A document required by law or international treaty.

b. NGS .

c. CID .

d. Federal specification or standard (performance preferred over detail design) .

e. Military specification or standard (performance preferred over detail design) .

3. Useof Performance-Oriented Standardization Documents. The unnecessary or premature application of “how-to-design” or "how-to-manage” requirements can constrain or reduce technological innovations and cost-effective solutions. Standardization documents shall describe what is needed in terms of form, fit, and function rather than detail design requirements or “how-to” requirements, when practicable.

4. Use of Contractor Management Systems. Use the contractor’s management systems, internal procedures, methods, and processes, including in-process statistical controls, instead of requiring compliance with a Government standard, unless the contractor’s systems do not meet DoD needs. One useful approach is to evaluate the contractor’s existing written procedures as provided in response to a specific request in the solicitation, and if acceptable, place those written procedures on contract rather than specifying a Government standard. Such an approach can reduce cost and time, while promoting commercial practices and dual use production lines.

5. Functional Discipline Requirements. Requirements that specify such functional disciplines as quality assurance, integrated logistics support, configuration management, reliability, or maintainability should not be included as blanket requirements. Such

functional discipline requirements must be fully justifiable as an essential need and shown to be cost effective before their application.

6. Tailoring of Standardization Documents. Tailoring is the process of evaluating individual requirements to determine if they are pertinent and cost-effective for a specific acquisition, and then modifying the requirements to ensure they are kept to a minimum to meet actual needs and that they contribute to a balance between needs and costs. Tailoring of standardization documents is accomplished by rewriting, extracting, or eliminating requirements, and by eliminating or controlling chain referencing of documents.

a. Rewriting Requirements. If a standardization document is generally acceptable, it may be referenced and changes made to certain paragraphs through the contract to tailor requirements to the specific application. If those rewritten requirements are likely to be used repetitively in the future, submit the rewritten requirements to the document's preparing activity to prepare a permanent change or recommend the preparation of a new standardization document to meet the recurring need. Use caution when rewriting requirements in a specification since certain changes may alter the standard item of supply unnecessarily and undermine any standardization efforts.

b. Extracting Requirements. When only a small portion of a standardization document is needed, extract the requirements rather than unnecessarily referencing the entire document.

c. Eliminating Requirements. When only portions of a standardization document are needed, but the requirements are too extensive to extract, specify only the applicable requirements. To help in that effort, document preparers should structure standards in a sectionalized format (or a similar format that facilitates tailoring) as much as possible. Sectionalization is the structuring of requirements in several individual sections. Each section contains a separate and distinct group of *requirements intended for a* defined application.

d. Eliminating Chain Referencing (Tiering). Nearly all standardization documents invoke references as part of their text, which in turn reference other documents, which reference other documents, and so on. Thus the use of standardization documents, or any requirements documents, is the start of a complex chain or tier of references that result in the unintentional imposition of requirements that do not add value to the acquisition and detract from the

essential requirements. Chain referencing can be controlled in part by extracting and eliminating requirements and through the proper application of documents during the acquisition phases. Besides these efforts, a well-planned decision ‘during the acquisition process needs to be made to limit contractually the applicable tiers of references placed on the contractor. If a particular requirement in a lower-tiered reference is important, make it a part of the contract or higher-tiered references to give visibility to its importance.